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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/709,607      | 05/18/2004  | Ping-Yang Chen       | 12590-US-PA         | 3606             |

31561 7590 01/19/2007  
JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE  
7 FLOOR-1, NO. 100  
ROOSEVELT ROAD, SECTION 2  
TAIPEI, 100  
TAIWAN

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| EXAMINER |
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WU, IVES J

|          |              |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

1724

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 01/19/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/709,607             | CHEN ET AL.         |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Ives Wu                | 1724                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 12 and 15-17 is/are rejected.
- 7) ☒ Claim(s) 5-11, 13-14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/28/06</u> .   | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

(1). Applicants' Amendments (claims and Specification) and Remarks filed on October 26, 2006 have been received.

Claim 1 is amended.

The rejection for claim 1 in prior Office Action dated August 2, 2006 is revised in response to the Amendments filed on October 26, 2006 and presented with rest of the claims herein below.

#### *Claim Rejections - 35 USC § 103*

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

(2). **Claims 1-4, 15-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over Drori (US004642182) in view of Strauss (US005401404A).

As to a gas inlet, a gas outlet and a hollow interior in a pipe trap body in **independent claim 1**, Drori (US004642182) discloses multiple-disc type filters in a housing shown in Figure 3A, a liquid inlet 44, a liquid outlet 46 and hollow interior between the housing 30 and filtration unit 20.

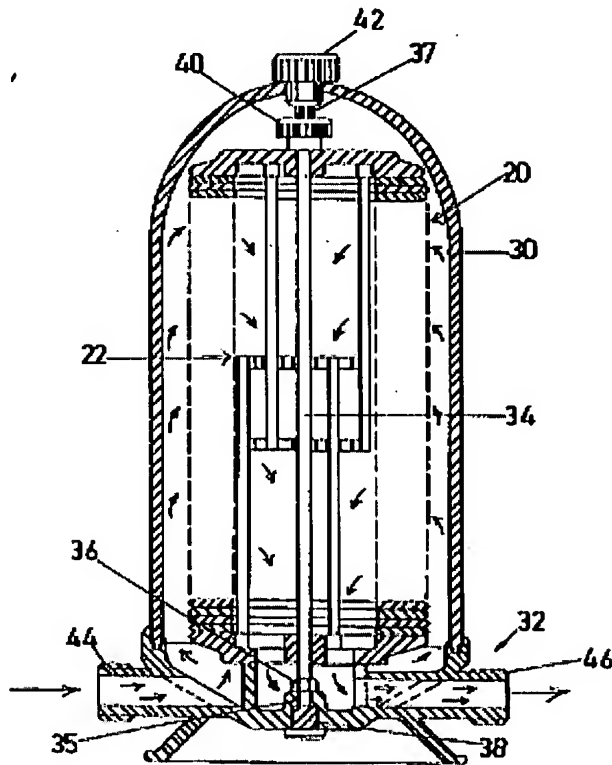


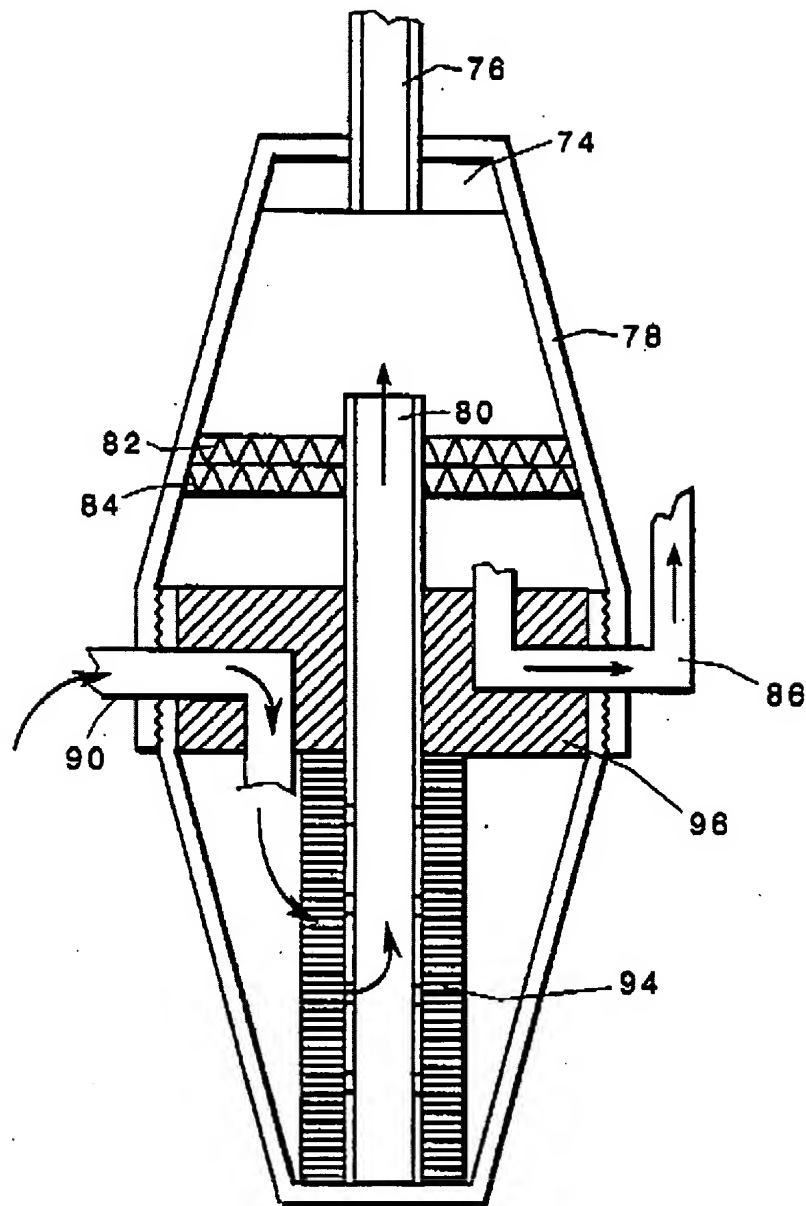
FIG 3A

As to a disc filter set up inside the pipe trap body in **independent claim 1**, Drori discloses multiple disc filter 20 in Figure 3A.

As to a pipe setup inside the pipe trap body with one end linked to the disc filter and the other end linked to the gas outlet, an area on the pipe facing the gas inlet in **independent claim 1**, Drori discloses in Figure 3A, (no number) a section facing the inlet 44 which connects to disc filtration unit 20 at one end, and its other end connects to the outlet 46.

As to a plurality of mesh filters set up inside the pipe in **independent claim 1**, Drori **does not teach** the mesh filters set up inside the pipe.

However, Strauss (US005401404) teaches the plastic mesh separator 82 and 84 in Figure 2 in the outlet.



**Figure 2**

The advantage of adding the mesh separator in the outlet area is to assist to further remove impurity such as oil in the patentee's application.

Therefore, it would have been obvious at time of the invention was made to install further mesh filters of Strauss in the outlet of housing disclosed by Drori in order to obtain the above-mentioned advantage.

As to the gaseous exhaust entering the pipe trap from inlet, passing through the outer wall of the pipe into the disc filter interior, and traveling through the mesh filters sequentially before emerging from pipe trap via the gas outlet in **independent claim 1**, Drori discloses in the Figure 2 by arrowing the directions of the flow that includes flow entering the pipe trap, passing through outer wall of the pipe into disc filter interior, and traveling through the mesh filters sequentially before the outlet when the teaching of Strauss is combined.

As to pipe trap for filtering gaseous exhaust in **independent claim 1**, the disclosure of prior art references meets the requirements of present claim in terms of apparatus and their setup, it is reasonable to presume that the housing of Drori would be made as a pipe trap device in light of their functional similarities of each unit as well as types, connections of each unit. Although it is disclosed in prior art references for filtering liquid system, it would also be useful for the fluid such as filtering gaseous exhaust because it is intended use and not to be considered as limitation and of no significance in the claim construction.

As to the a plurality of mesh filters for filtering the particles from the gaseous exhaust set up inside the pipe in **independent claim 1**, the disclosure of prior art reference Struss meets the requirements of the instant claim, it would be useful for filtering the particles from the gaseous exhaust as well. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and prior art in order to patentably distinguish the claimed invention from prior art. If the prior art structure is capable performing the intended use, then, it meets the claim. MPEP §§ 7.37.09.

The same rationale of rejections for **claims 2-4 and 15-16** have been recited in prior Office Action dated August 2, 2006.

(3). **Claim 12** is rejected under 35 U.S.C. 103(a) as being unpatentable over Drori (US004642182) in view of Strauss (US005401404A) further in view of Uhlenbrock (US006858051B2) and Lavery et al (US003413778) for the same rationale recited in prior Office Action dated August 2, 2006.

(4). **Claim 17** is rejected under 35 U.S.C. 103(a) as being unpatentable over Drori (US004642182) in view of Strauss (US005401404A) further in view of Sprouse (US002929464) for the same rationale recited in prior Office Action dated August 2, 2006.

***Allowable Subject Matter***

(5). **Claims 5-11 and 13-14** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments filed on October 26, 2006 have been fully considered but they are not persuasive.

Applicants argue the prior art references Drori (US004642182), Strauss (US005401404A) does not teach or disclose a pipe trap for filtering gaseous exhaust, comprising: "a plurality of mesh filters set up inside the pipe for filtering the particles from the gaseous exhaust". The combined teaching of Drori (US004642182) and Strauss (US005401404A) disclose the a pipe trap and a plurality of mesh filters. Although the purpose of mesh filters is used to further remove the impurities, it would also be capable to remove the particles from exhaust gases once it is employed for the treatment of exhaust gases in view of the same structure of mesh filters.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ives Wu whose telephone number is 571-272-4245. The examiner can normally be reached on 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner: Ives Wu

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Date: January 16, 2007

DUANE SMITH  
PRIMARY EXAMINER

*D. Smith*  
*1-16-07*